OHIO PUBLIC WORKS COMMISSION

65 East State Street, Suite 312 Columbus, Ohio 43215 (614) 466-0880

APPLICATION FOR FINANCIAL ASSISTANCE Revised 6/90 CBE 06

IMPORTANT: Applican Applicati	t should consult the "Instructions for Completion of Pro on" for assistance in the proper completion of this forn	<u>iect</u> n.							
APPLICANT NAME STREET	City of Springdale 12105 Lawnview Avenue								
CITY/ZIP	Springdale, Ohio 45246								
PROJECT NAME PROJECT TYPE TOTAL COST	Kemper Road Bridge Widening Bridge & Roadway Improvements; SI2/LTIP \$275,059.00								
DISTRICT NUMBER COUNTY	2 Hamilton								
PROJECT LOCATION 2	ZIP CODE45246	92 OCT 2	STEP :						
	DISTRICT FUNDING RECOMMENDATION	<u></u>	MEST						
To be	e completed by the District Committee ONLY	8	E TIE						
	MOUNT OF FUNDING: \$ 185,000 DING SOURCE (Check Only One):								
State Issue 2 District Allocation — Grant — Loan — Loan Assistance State Issue 2 Small Government Fund — State Issue 2 Emergency Funds — Local Transportation Improvement Fund									

FOR OPWC USE ONLY

OPWC PROJECT NUMBER:

OPWC FUNDING AMOUNT: \$

1.0 APPLICANT INFORMATION

1.1	CHIEF EXEC OFFICER TITLE STREET CITY/ZIP PHONE FAX	UTIVE Cecil Osborn City Administrator City of Springdale 12105 Lawnview Avenue Springdale, Ohio 45246 (513) 671-0885 (513) 671-2434
1.2	CHIEF FINAL OFFICER TITLE STREET CITY/ZIP PHONE FAX	NCIAL Doyle Webster Finance Director City of Springdale 12105 Lawnview Avenue Springdale, Ohio 45246 (513) 671-0885 (513) 671-2434
1.3	PROJECT MANAGER TITLE STREET CITY/ZIP PHONE FAX	Wayne F. Shuler, P.E., P.S. City Engineer CDS Associates, Inc. 11120 Kenwood Road Cincinnati, Ohio 45242 (513) 791-1700 (513) 791-1936

1.4	PROJECT	
	CONTACT	Wayne F. Shuler, P.E., P.S.
	TITLE	City Engineer
	STREET	CDS Associates, Inc.
	•	11120 Kenwood Road
	CITY/ZIP	Cincinnati, Ohio 45242
	PHONE	(513) 791-1700
	FAX	(513) 791-1936
1.5	DISTRICT	
	LIAISON	Joseph D. Cottrill
	TITLE	District 2 Liaison Officer
	STREET	Hamilton County Engineers Office
	···	138 E. Court Street, Room 700
	CITY/ZIP	Cincinnati, Ohio 45202
	PHONE	(513) 632-8540
	FAX	(513) 732-9748
	1 4 5/ 5	

2.0 PROJECT INFORMATION

<u>IMPORTANT:</u> If project is multi-jurisdictional in nature, information must be <u>consolidated</u> for completion of this section.

2.1 **PROJECT NAME:** Kemper Road Bridge widening, East Kemper Road over CSX Railroad.

2.2 BRIEF PROJECT DESCRIPTION - (Sections A through D):

A. SPECIFIC LOCATION:

City of Springdale, in Northern Hamilton County, West Kemper Road, 0.1 miles east of SR-747.

B. **PROJECT COMPONENTS:**

- 1. 16' total bridge widening, including 4'-6" walk and additional 11'-6" lane.
- 2. New asphalt wearing surface and waterproofing for existing bridge.
- 3. Repair of two (2) deteriorated bridge piers.

C. PHYSICAL DIMENSIONS/CHARACTERISTICS:

West Kemper Road was previously widened along the Tri-County Shopping Mall up to this bridge structure with one additional lane and new sidewalk. This project will continue that widening and sidewalk across the CSX railroad tracks. The total length of work, including approaches is 200 feet.

D. DESIGN SERVICE CAPACITY:

<u>IMPORTANT:</u> Detail shall be included regarding current service capacity vs proposed service level. If road or bridge project, include ADT. If water or wastewater project, include current residential rates based on monthly usage of 7,756 gallons per household.

This segment of East Kemper Road operates as a major arterial for Springdale, Sharonville, Forest Park, Colerain Township, Blue Ash, Sycamore Township and Symmes Township. This route serves as a primary East-West connection between SR-747 and SR-42. The proposed improvements will support traffic needs created by development of the Kroger property located just North and East of this bridge as well as the expanding traffic needs of the Westbound access to the Tri-County Shopping area. A Barton-Aschman Assoicates, Inc. traffic report indicates an approximate 50% increase in peak hour traffic in this corridor between 1990 and the year 2000.

2.3 REQUIRED SUPPORTING DOCUMENTATION

(Photographs/Additional Description; Capital Improvements Report; Priority List; 5-year Plan; 2-year Maintenance of Effort report, etc) Also discuss the number of temporary and/or fulltime jobs which are likely to be created as a result of this project. Attach Pages. Refer to accompanying instructions for further detail.

3.0 PROJECT FINANCIAL INFORMATION

3.1 PROJECT ESTIMATED COSTS (Round to Nearest Dollar):

a)	Project Engineering Costs:	
-	1. Preliminary Engineering	\$ N/A
	2. Final Design	\$ N/A
	3. Construction Supervision	\$ N/A
b)	Acquisition Expenses	,
•	1. Land	\$ N/A
	2. Right-of-Way	\$ N/A
c)	Construction Costs	\$250,059
ď)	Equipment Costs	\$
e)	Other Direct Expenses	\$
f)	Contingencies ¹	\$_25,000
g)	TOTAL ESTIMATED COSTS	\$275,059

3.2 PROJECT FINANCIAL RESOURCES (Round to Nearest Dollar and Percent):

		Dollars	%
a) b) c) d)	Local In-Kind Contributions* Local Public Revenues Local Private Revenues Other Public Revenues	\$ \$_62,559 \$	23
u)	 ODOT FMHA OEPA OWDA CDBG 	\$ \$ \$ \$	
e)	6. Other <u>MRF</u> OPWC Funds 1. Grant 2. Loan	\$ <u>27,500</u> \$ <u>185,000</u> \$	10 67
f)	· 3. Loan Assistance TOTAL FINANCIAL RESOURCES	\$	100

If the required local match is to be 100% In-Kind Contributions, list source of funds to be used for retainage purposes.

AVAILABILITY OF LOCAL FUNDS 3.3

Indicate the status of all local share funding sources listed in section 3.2(a) through 3.4(c). In addition, if funds are coming from sources listed in section 3.2(d), the following information must be attached to this project application:

- The date funds are available;
- Verification of funds in the form of an agency approval letter or agency project number. Please include the name and number of the agency contact person. 2)

3.4 PREPAID ITEMS N/A

Definitions:

Cost - Cost Item - Prepaid - Resource Category - Verification - IMPORTANT: Verificatio	acquisition expenses (land or right Cost items (non-construction cost prior to receipt of fully executed I Source of funds (see section 3.2).	ts directly related to the project), paid Project Agreement from OPWC. Trant(s) used to for prepaid costs, s Certification (see section 1.4).
COST ITEM	RESOURCE CATEGORY	
1)	RESOURCE CATEGORY	<u>COST</u>
2)		\$
3)		\$
	TOTAL OF PREPAID ITEMS	\$
This section need only be co	LACEMENT or NEW/EXPAN mpleted if the Project is to be funde DJECT REPAIR/REPLACEMENT Repair/Replacement 90%)	
TOTAL PORTION OF PRO State Issue 2 Funds for (Not to Exceed	New/Expansion	\$% \$%
4.0 PROJECT	SCHEDULE	
•	ESTIMATED ESTIMA START DATE COMPLE	TED ETE DATE
4.1 ENGR. DE 4.2 BID PROC 4.3 CONSTRU	ESS 06/14/93 07/05/9	93

5.0 APPLICANT CERTIFICATION

The Applicant Certifies That:

Cecil W. Osborn, City Administrator

As the official representative of the Applicant, the undersigned certifies that: (1) he/she is legally empowered to represent the applicant in both requesting and accepting financial assistance as provided under Chapter 164 of the Ohio Revised Code and 164-1 of the Ohio Administrative Code; (2) that to the best of his/her knowledge and belief, all representations that are a part of this application are true and correct; (3) that all official documents and commitments of the application that are a part of this application have been duly authorized by the governing body of the Applicant; (4) and, should the requested financial assistance be provided, that in the execution of this poject, the Application will comply with all assurances required by Ohio Law, including those involving minority business utilization, Buy Ohio, and prevailing wages.

IMPORTANT: Application certifies that physical construction on the project as defined in this application has not begun, and will not begin, until a Project Agreement on this project has been issued by the Ohio Public Works Commission. Action to the contrary is evidence that OPWC funds are not necessary to complete this project.

IMPORTANT: In the event of a project cost underrun, application understands that the identified local match share (sections 3.2(a) through 3.2(c) will be paid in full toward completion of this project. Unneeded OPWC funds will be returned to the funding source from which the project was financed.

Certifying	Representative (Type Name and Title)
Ceril	10000 9-30-92
Signafurè	7Date Signed
Applicant sha	I check each of the statements below, confirming that all required information is included in this application:
	A <u>five-year Capital Improvements Report</u> as required in 164-1-31 of the Ohio Administrative Code and a <u>two-year</u> <u>Maintenance of Local Effort Report</u> as required in 164-1-12 of the Ohio Administrative Code.
<u> </u>	A registered professional engineer's estimate of useful life as required in 164-1-13 of the Ohio Administrative Code. Estimate shall contain engineer's <u>original seal and signature.</u>
<u> X</u>	A registered professional engineer's estimate of cost as required in 164-1-14 and 164-1-76 of the Ohio Administrative Code. Estimate shall contain engineer's <u>original seal and signature.</u>
	A certified copy of the legislation by the governing body of the applicant authorizing a designated official to submit this application and to execute contracts.
Yes _ <u>X</u> N/A	A copy of the cooperation agreement(s) (for projects involving more than one subdivision or district).
Yes _XN/A	Copies of all invoices and warrants for those items identified as "pre-paid" in section 4.4 of this application.

6.0 DISTRICT COMMITTEE CERTIFICATION

The District Integrating Committee for District Number $\frac{2}{}$ Certifies That:
As the official representative of the District Public Works Integrating Committee, the undersigned hereby certifies: that this application for financial assistance as provided under Chapter 164 of the Ohio Revised Code has been duly selected by the appropriate body of the District Public Works Integrating Committee; that the project's selection was based entirely on an objective, District-oriented set of project evaluation criteria and selection methodology that are fully reflective of and in conformance with Ohio Revised Code Sections 164.05, 164.06, and 164.14, and Chapter 164-1 of the Ohio Administrative Code; and that the amount of financial assistance hereby recommended has been prudently derived in consideration of all other financial resources available to the project. As evidence of the District's due consideration of required project evaluation criteria, the results of this project's ratings under such criteria are attached to this application.
William W. Brayshaw, Chairman, District 2 Integrating Committee Certifying Representative (Type Name and Title)
William W. Bransha 3-1-93 Signature/Date Signed

KEMPER ROAD BRIDGE WIDENING OPINION OF CONSTRUCTION COST CITY OF SPRINGDALE, OHIO

SPEC NO.	ITEM	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT	ITEM
202	Portions of Structures Removed	•	ST		10,000.00
203	Embankment	260	. , , \	10.00	2,600.00
254	Pavement Planing (3") & Removal of Existing Waterproofing	686	SY	12.00	11,868.00
403	Asphalt Concrete (AC-20)	09	CV	120.00	7,200.00
404	Asphalt Concrete (AC-20)	51	ζ	120.00	6,120.00
503	Cofferdams, Cribs & Sheeting	-	ST		5,000.00
503	Unclassified Excavation	170	CY	15.00	2,550.00
507	42" Diameter Cast-in-Place Reinforced Concrete Piers	40	47 ·	200.00	8,000.00
509	Reinforcing Steel, Grade 60	19368	SBT	.45	8,716.00
509	Epoxy Coated Reinforcing Steel Grade 60	8275	LBS	.65	5,379.00
511	Class "C" Concrete - Footings	85	CY	250.00	21,250.00
511	Class "C" Concrete - Abutment Above Footings	40	CY	. 450.00	18,000.00
511	Class "C" Concrete - Piers Above Footings	62	СУ	400.00	24,800.00
511	Class "C" Concrete - Superstructure Sidewalk & Parapets	37	СУ	400.00	14,800.00
512	Type "D" Waterproofing	800	SY	15.00	12,000.00
515	Prestressed Concrete Bridge Members, (B17-48); as per plan	392	5	70.00	27,400.00

KEMPER ROAD BRIDGE WIDENING OPINION OF CONSTRUCTION COST CITY OF SPRINGDALE, OHIO

Page 2

ITEM	7,840.00	960.00	240.00	460.00	1,148.00	2,720.00	1,980.00	1,840.00	610.00	600.00	5,000.00	1,000.00	1,120.00	150.00	11,200.00
UNIT	80.00	20.00	20.00	2.00	2.00	80.00	20.00	40.00	10.00	10.00	20.00	10.00	560.00	5.00	100.00
UNIT OF MEASURE	H-1	EA	EA	ЗS	47	41	47	λO	ქ ე	ച 7	SF	SF	EA	SF	λS
ESTIMATED QUANTITY	86	48	12	230	574	34	66	46	61	09	100	100	2	30	112
ITEM	Prestressed Concrete Bridge Members, (B21-48); as per plan	0.77"x5"x10" Laminated Elastomeric Bearings	1"x5"x15" Unlaminated Elastomeric Bearings	Polystyrene Joint Filler, Modified as per plan	Joint Sealer, as per plan	Railing (Bridge Parapet Railing on Wingwalls)	Railing (Relocated Existing Bridge Parapet Railing)	Porous Backfill	6" Perforated Helical Corrugated Steel Pipe, Including Specials 707.01	6" Non-Perforated Helical Corrugated Steel Pipe, Including Specials 707.01	Patching Concrete Structures, as per plan	Relocated Guardrail	Type A Bridge Terminal Assembly	5" Concrete Walk	Reinforced Concrete Approach Slab
SPEC NO.	515	516	516	516	516	517	517	518	518	518	519	909	909	909	611

KEMPER ROAD BRIDGE WIDENING OPINION OF CONSTRUCTION COST CITY OF SPRINGDALE, OHIO

Page 3

320.00 5,000.00 5,000.00 5,000.00 2,340.00 3,600.00 3,600.00 2,648.00 250,059.00 25,000.00 275,059.00 ITEM COST 8 9.00 30.00 9.00 8.00 UNIT UNIT OF MEASURE က္ ഗ് S_{1} ≿ չ ≿ 出 느 ESTIMATED QUANTITY 400 260 400 331 120 TOTAL 10% Contingency GRAND TOTAL Sealing of Concrete Surfaces (See Proposal Note & General Notes) Concrete Mat Slope Protection Sawing & Sealing Bituminous Concrete Joints ITEM Grout Patching of Existing Concrete Beams Maintenance of Traffic Seed and Mulch Mobilization Field Office SPEC NO. SPL SPL 쭚 SPL 614 619 624 629

USEFUL LIFE:

UPON SATISFACTORY COMPLETION OF THE WORK, THE USEFUL LIFE OF THE KEMPER ROAD BRIDGE WIDENING WILL BE 50 YEARS (BRIDGE STRUCTURE) AND 10 YEARS (PAVEMENT RESURFACING).

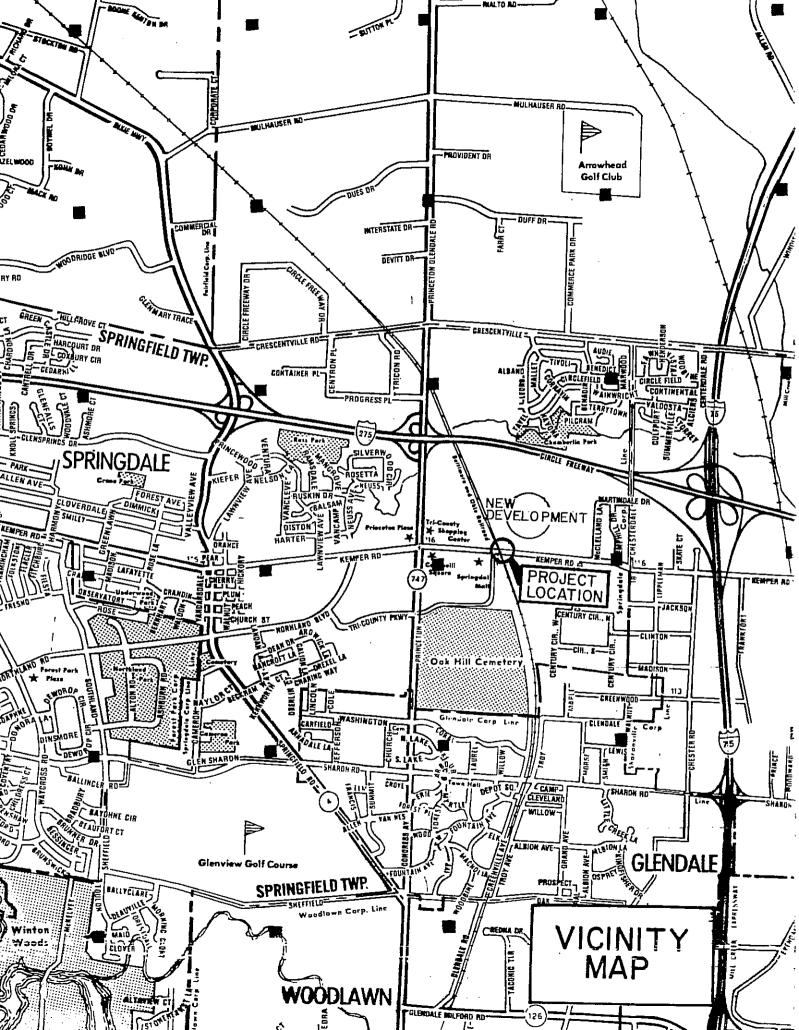
OPINION OF CONSTRUCTION COST IS SUBJECT TO ADJUSTMENT UPON DETAIL, PLAN COMPLETION AND UPON RECEIPT OF BIDS BY QUALIFIED CONTRACTORS.

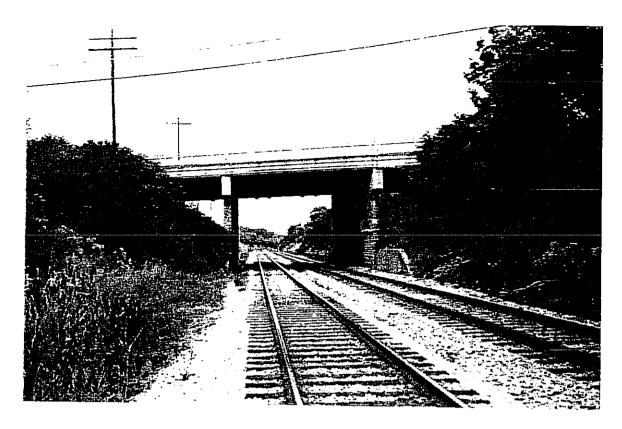
Wayne F. Shuler, P.E., P.S.

SSIGHAL WEST

HIPHARA

F. Shuler 38527

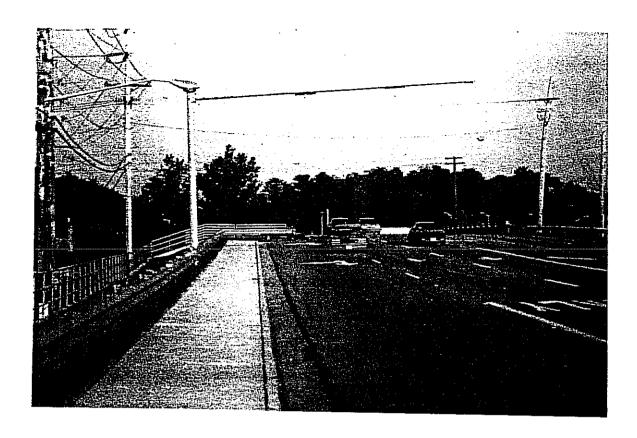




South Side of East Kemper Road Bridge over the CSX Railroad Tracks.



Spalling of Bridge Pier Columns of the East Kemper Road Bridge over the CSX Railroad Tracks.



West End of Bridge. Note that widening of Kemper Road for Third Westbound Lane is Completed up to the bridge. This Widening Continues West to SR - 747.



East End of Bridge. Note Deteroriated Condition of Asphalt Surface on the Bridge Deck.



Note Transverse Cracking of Asphalt above each Pier Location.



Asphalt Surface on Bridge is Rutted. Note Longitudinal and Transverse Cracking of Pavement. Also Note Polished Aggregate of Asphalt Surface.



City of Springdale

DOYLE H. WEBSTER Clerk of Council/Finance Director RONALD L. PITMAN Mayor

CECIL W. OSBORN City Administrator

MEMO

TO:

Mr. William Brayshaw, P.E., P.S. Chairman, District 2 Committee

FROM:

Wayne Shuler, City Engineer

City of Springdale

RE:

Authorizing Legislation

Authorizing legislation shall be introduced to Council at the October 7, 1992, Council Meeting and will be forwarded to your office immediately upon its enactment.



City of Springdale

DOYLE H. WEBSTER Clerk of Council/Finance Director RONALD L. PITMAN Mayor

CECIL W. OSBORN City Administrator

MEMO

TO:

Mr. William Brayshaw, P.E., P.S.

Chairman, District 2 Committee

FROM:

Wayne Shuler, City Engineer

City of Springdale

RE:

Certification of Local Funds

The City of Springdale has applied for a grant of \$82,500 (the local share of the Issue 2 Application) from Municipal Road Funds.

PROJECT APPLICATION - MUNICIPAL ROAD FUND

Instr	uctions:	Use one form for each project. Assign priority to projects. The application cost estimate shall be prepared: By the Municipality's Engineer, or a registered Engineer of the Municipality's choosing.
(1)	Municipa	Submit before August 1. Lity City of Springdale
(2)	Road Nam	ue West Kemper Road
(3)	Project	Limits Sta. 16+53 to Sta. 22+10
(4)	Project	Priority No. 1
(5)	Present	Roadway Data:
	(a) Pav	't. Width 66' (b) R/W Width 125' (c) Curb Type Conc.
	(d) Typ	e Surface Asphalt (e) Type Base Gong Box Beam (f) Sh'dr. Type N/A
	(g) Shl	dr. Width N/A (h) Year Last Resurfaced 1970 Note 1
(6)	traffic	condition of project area: List deficiencies and reasons for improvement. evelopment along the W. Kemper Road corrider and the susequenty increase in an additional lane is required westbound. This lane addition has been warranted raffic study by Burton-Aschman Associates, Inc.
(7)	16' tota	description or statement of work to be done: Include width and type of ment and other project particulars. I bridge widening, including 4'-6" walk and additional 11.5' lane, new and new asphalt surface on existing bridge (See attached plan sheet).
(8)	Traffic	
(9)	Cost Est	
	(b) Po Construct Other Con	ineering plans are necessary list the following costs: reparation of preliminary plans & estimate, etc. reparation of final plans & estimate, etc. stion Cost Estimate (See Note 4) sts (specify) oject Cost for which application to MRF is made \$ 0. Completed 0. Completed 82,500
(10)		date construction can be started after approval March 1993
(11)	Estimated	date construction can be started if not funded 100% from Municipal Road ject would be postponed indefinitely.
(12)		mate Prepared By: CDS Associates Inc
(13)		On Prepared By: Don Shyegada Project Forings
	Endorseme	Date:
NOT	•	he year the bridge was last widened.
		ee attached traffic count print out.
	3.	Barton-Aschman Associates, Inc. traffic report indicates an approximate 50% increase in peak hour traffic between 1990 & 2000.

Total opinion of construction cost is \$275,000 of which 70% of funding is being requested through Issue 2 funding.

4.

15 MINUTE, 2 CHANNEL VEHICLE COUNT CORRECTION FACTOR: 1.00

CORRECTION FACTOR: 1.00
LOCATION: ON KENPER ROAD BETWEEN CENTURY BOULEVARD AND TRI-COUNTY PKNY

WEATHER! CLEAR

OPERATOR: MARK CLIFF MICHAUS

FILENAME: 1746KEH3 MUNDAY 3 / 9 / 92

HOUR			IEST		HOUR			AST		HOUR	COMPINED
BEGINS	Q	15	20	45	TOTAL	0	15	30	45	TOTAL	TOTAL
KA											18
12	35	11	14	14	74	13	19	13	4	48	122
1	21	16	6	.7	50	10	å	1	. 9	26	76
. 2	6	6	8	6	26	2	3	7	2	14	40
3	1	0	10	å	17	. 2	6	2	11	21	38
4	11	9	12	7	39	\$	5	10	B	29	4B
5	10	1!	10	10	49	11	23	26	39	99	148
6	28	30	59	195	222	41	91	132	171	425	647
7	110	138	162	185	595	174	321	433	522	1450 .	2045
9	154	170	154	192	670	341	247	176	147	911	1581
9	133	135	165	183	616	157	128	139	135	549	1185
10	168	164	189	201	722	145	158	145	184	832	1354
11	223	217	277	287	1006	204	210	228	237	877	1883
Fit	-	•			,						
12	345	31B	322	307	1292	788	294	303	32 3	1208	2500
1	277	293	196	226	7 82	290	241	276	248	1075	2057
2	229	204	241	238	. 914	248	214	237	219	720	1834
3	254	247	245	313	1079	226	248	260	227	961	2040
4	259	312	289	335	1205	271	254	294	303	1!12	2317
5	385	347	332	329	1393	283	302	277	293	1175	2589
<u> </u>	299	285	234	213	1021	244	232	199	213	900	1921
7	194	194	153	136	637	171	178	153	202	724	1361
8	161	146	83	92	472	181	163	142	126	612	1084
9	88	75	54	54	281	138	112	83	41	374	6 75
10 .	33	36	34	30	135	47	37	33	27	164	299
	33	23	17	28 	101	19	26	17	14	78	179
TOTALS					13578					14424 .	28022
	DUR 15 7:1										
VOLUME Direct	IONAL SPLIT		E9T :	639 282	EAI		17 72 %		COMBINED	2256	•
PEAK H	DUR FACTOR			0.84			7 7		•	0.80	
	DUR IS 414	5 70 5 1	45								
	IDNAL SPLIT		EST 1	1399 54 7	EAS		463		COMBINED:	2584	
PEAK HO	OUR FACTOR			0.91		0.4	78			0.97	

Barton-Aschman Associates, Inc.

820 Davis Street Evanston, Illinois 60204-1381 USA

Phone: (312) 491-1000 Fax: (312) 475-6053

MEMORANDUM TO: Lawrence Pregon

Quadrelle Realty Service, Inc.

FROM:

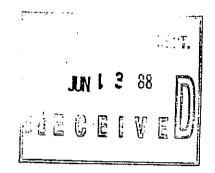
James K. Morton

DATE:

June 10, 1988

SUBJECT:

Traffic Study, Springdale Development; Springdale, Ohio



Introduction

This memorandum summarizes the findings of a traffic study conducted for the purpose of evaluating the impact of the proposed construction of Springdale Development. Resulting recommendations include suggested improvements to the on-site and off-site roadways and intersections. The planned unit development (PUD) site contains 115.6 acres and is located on the north side of Kemper Road and east of the CSX Railroad tracks. Currently occupying the site is the 612,000square-foot Kroger Company warehouse, which is planned to be rehabilitated and continue in use as a warehouse. When the development is completed, it will contain a total of 1,272,625 square feet of floor area.

The effects of the proposed development were evaluated with respect to on-site and off-site traffic flow, on-site traffic circulation, and capacity and location of the site roadway intersection with the adjacent major arterial, Kemper Road. Paramount is the safety of the motoring public and preservation of residential areas. The proposed PUD will include office and research space, industrial warehouse space, specialty retail space, several restaurants, and a health club. In addition, there is a hotel planned. Finally, there will be a neighborhood shopping center with approximately 143,750 square feet of gross leasable area (GLA).

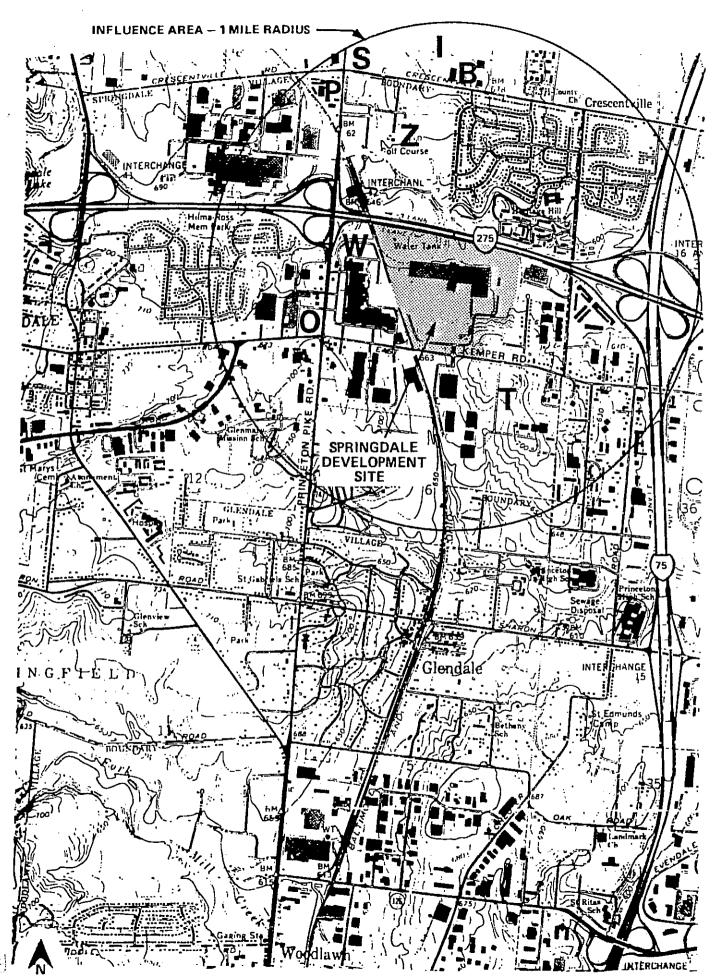
Figure 1 shows the study area and the location of the existing site access drive on Kemper Road. Also shown is the area of influence for this study, which is within one mile of the site entrance and includes all planned development.

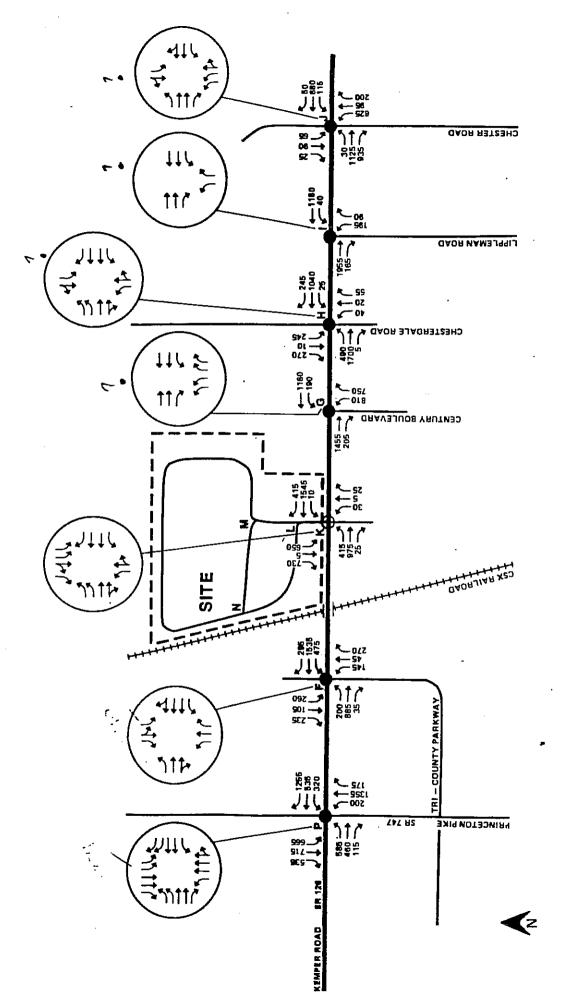
Site and Area Characteristics

Springdale Development

The 115.6-acre site is located in Springdale, Ohio, approximately 10 miles north of Cincinnati, Ohio. The site is bounded by Interstate Highway 275 (I-275) on the north, the CSX Railroad tracks on the west, Kemper Road on the south, and the Kroger Company industrial property and single-family residential property on the east. Currently located on the site is a 612,000-square-foot single-story warehouse, of which a small portion is presently in use.







Traffic Assignment 3 LONG TERM FUTURE — YEAR 2000 Figure 5

000 P.M PEAK HOUR TRAFFIC EXISTING TRAFFIC SIGNAL

O PHOPOSED THAFFIC SIGNAL --- LANE USAGE

Table 6
TRAFFIC ASSIGNMENT INTERSECTION CAPACITY ANALYSES¹

		Existing	Existing Condition		1990³	Year 2	Year 2000 ³	
Intersection		Vehicle Delay²	Level of Service	Vehicle Delay²	Level o		Level of Service	
Princeton Pike	P	66J 69.2	ť F	43 342	€E+	83.9 84.5	₹F	
Tri-County Parkway	F	55 4 24.4	R-E	22.1	С	N/U 28.4	D+	
Site Access Road	Κ	7.2		10.1	В	28,7/39.1	D	
Century Boulevard	G	1.8. 6.7	B+	11.2	В	N/U 27.1	D+	
Chesterdale Road	Н	49,5 15.1	C+E.	t 24.0	С	No 25.0 20:	¹ C	
Lippleman Road	ı	N/W 13.3	В	10.1	В	N/012.6	В	
Chester Road	J	80.6 118.7	€F *	15.6	C+	μ/υ 19.4	C+	

¹ Capacity analysis performed using optimal sequences and timings.

Traffic Assignment 3 includes the addition of dual turn lanes at seven key locations, as follows:

Dual left-turn lanes:

Intersection K: west leg and north leg.

Intersection G: south leg.

Intersection H: west leg.

Dual right-turn lanes:

Intersection P: east leg.

Intersection K: north leg.

Intersection G: south leg.

Lai Schy,

The very high traffic volume on westbound Kemper Road between Intersections \tilde{F} and K (2,305 vehicles) will require the addition of one westbound traffic lane, including an additional westbound lane on the bridge over the CSX Railroad tracks.

Internal Circulation

The function of a circulation system within the interior of Springdale Development is to provide simple, efficient, and convenient interchange of vehicular movement between the access points and all auto-oriented areas within the site. Vehicular circulation should be accomplished with a minimum of turning or stopping conflicts. The vehicular circulation system also must accommodate emergency vehicles, trucks, and other service vehicles, public transit, taxis, etc.

² Average intersection vehicular delay in seconds.

³ Recommended roadway and intersection improvements are included.

BRIDGE INSPECTION CODES

Good Condition No repair required Hinor deficiency, item still functioning as designed
 Hajor deficiency, item in need of repair to continue functioning as designed. Poor Condition critical Condition - Item no longer functioning as designed

SUMMARY CODES

Cades 9	Description	
	As built condition	
8	Very good condition	- no problems noted.
σ	Good condition	- some minor problems.
8	Satisfactory condition	- structural elements show some minor deterioration.
5	Fair condition	 all primary structural elements are sound, but may have minor section loss, cracking, or spalling. Secondary elements may have significant deterioration.
4	Poor condition	- advanced section loss, deterioration, or spalling
3	Serious condition	- loss of section, deterioration, or spalling have seriously affected primary structural components. Local failures are possible. Fatigue crocks in steel or
	•	shear cracks in concrete may be present.
2	Gritical condition	 - sdvanced deterioration of primary structural elements. Fatigue cracks in atcel c shear cracks in concrete may be present. Bridge should be closed, or closely monitored, until corrective action is taken.
1	w- 1	
i I	-imminent" failure conditi	lon - major deterioration or section loss present in critical structural components. Bridge is closed to traffic but corrective action may be put back in light
•		service.
. 0	Failed condition	- out of service - beyond corrective action.
	·	

SURVEY 167

••	
Code 0	Heaning
0	Inspected feature does not meet currently accepted standards.
1	Inspected feature meets currently accepted standards.
ห	Does not apply to this structure, i.e., a non-highway type bridge (railrood or pedestrian underpass etc.)
lst digi -	t - Bridge railing - smooth, solid, continuous concrete parapet (with or without aluminum top rail); double deep be rail with tubular backup tube (DDR-73).
2nd digi	t - Transitions (guardrail to bridge rail) Guardrail firmly attached to concrete parapet or continuous with bridge rail safety curbs or walks tapered or protected to eliminate snag points.
3rd digi	t - Approach Guardrail - Hinimum 150' length, blocked out deep beam rail with 6'-3" post spacing.
4th digi	t - Approach Guardrail Terminal - Turned down and anchored to concrete block or continuous beyond structure.
EFL di-i	- Devement Marking - it as on the structure - contails as less likes and likes for structure with b-

vement Harking - At or on the structure - centerline or lone lines, edge lines for structure with berm. 6th digit -7th digit -Restriction Signing - Regulatory signing such as load limit or spacing.
Warning Signing - Marrow bridge (less than 20') one lane, vertical clearance.

8th digit - Bridge End Harkers - delineation at ends of structure for narrow structures.

BRIDGE TYPE:	a 1 m2 1; m1		TYPE SERVICE:
t Digit Haterial:	2nd Digit Type:	3rd Digit Description:	1st Digit on/under:
Concrete	1. Slab	1. Simple Span	1. Route on structure
Prestressed	2. Beam	2. Continuous	2. Single route under structur
Concrete	3. Box Beam	3. Deck	
Steel .	4. Truss	4. Thru	2nd Digit Service on Bridge:
·Timber	5. Arch	5. Filled	1. Righway
Stone	6. Cirder	6. Orthotropic	2. Railroad
Aluminum	' (Floor System)	7. Moveble-Left	3. Pedestrion and/or bikewry
Cost Iron	7. Frame	8. Hovable-Bascule	4. Highway/Railroad

8. Suspension 9. Hoveble-Swing 5. Highway/Pedestrian 9. Culvert 0. Other 6. Overposs Structure at an 0. Other interchonge or second level of a multilevel interchange 7. Third Level (Interchange)

8. Fourth Level (Interchange) 9. Duilding or Plaza 0. Other

7. Railroad/Waterway 8. Highway/Waterway/Roilroad 9. Relief

3rd Digit Service Under Bric 1. Highway With or Without

 Pedestrian and/or bikeway 4. Highway/Rollroad 5. Waterway 6. Highway/Naterway

0. Other

pedestrian Railroad

8. Wrought Iron

0. Other

2.

- A. Open, no restriction
- B. Open, posted recommended but not legally implemented (all signs not in place)
- D. Open, would be posted or closed except for temporary shoring, etc. to allow for unrestricted traffic
- Open, temporary structure in place to carry legal loads while original structure is closed and awaiting replacement or rehebilitation
- Hew structure not yet open to traffic

- Bridge closed to all traffic Posted for load (may include other restrictions) Posted for other load-capacity restriction (speed, number of vehicles on bridge, etc.)

City of Springdale

Administrative Offices

RONALD L. PITMAN Mayor

CECIL W. OSBORN City Administrator

8 April 1993

Hamilton County Engineer's Office Room 603, County Administration Building 138 E. Court Street Cincinnati, Ohio 45202

Attn: Mr. Joe Cottrill

Re: Issue 2 F

Issue 2 Funding/MRF Funding Kemper Road Railroad Bridge

Dear Sir:

At its meeting last evening, Springdale City Council concurred with the proposed funding for improving the Kemper Road railroad bridge just east of Tri-County Mall. It is my understanding, based upon our earlier conversations, that we will receive \$185,000 from Issue 2 and \$27,500 from MRF. This will leave a local share of \$62,500 which will be Springdale's responsibility.

Enclosed please find a copy of Resolution 24-1992, which was adopted on October 2, 1992, authorizing the Issue 2 application for this project.

I would like to take this opportunity to thank you for considering our project. Please advise as soon as possible as to how we should proceed with implementation of the funding.

Sincerely,

Cecil W. Osborn City Administrator

CWO:mjb

Enclosure -

cc: Mayor

Assistant City Administrator

City Engineer

Supt. of Public Works

standards and quitable content to prove any order to pro-

RESOLUTION NO. R24- 1992

AUTHORIZING THE CITY ADMINISTRATOR TO FILE AN APPLICATION WITH THE OHIO PUBLIC WORKS COMMISSION FOR ISSUE 2 AND LOCAL TRANSPORTATION IMPROVEMENT PROGRAM (LTIP) FUNDS AND AUTHORIZING THE MAYOR AND CLERK OF COUNCIL/FINANCE DIRECTOR TO EXECUTE ALL CONTRACTS AND OTHER DOCUMENTS

WHEREAS, street and road repairs are a priority for the City of Springdale; and

WHEREAS, the Ohio Revised Code has allowed for the issuance of State Issue 2 and Local Transportation Improvement Program (LTIP) funds for 1993; and

WHEREAS, the District Public Works Integrating Committee of Hamilton County (DPWIC) is the recipient of State Issue funds from the Ohio Public Works Commission (OPWC), and

WHEREAS, the City of Springdale will apply for funding under State Issue 2/LTIP as part of the District 2 (Hamilton County) allocation for infrastructure repairs and improvements.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Springdale, Ohio, S/χ members elected thereto concurring:

- <u>Section 1.</u> That the Council of the City of Springdale does hereby endorse and support the applications for State Issue 2/LTIP funds for infrastructure repairs and improvements as follows:
 - Kemper Road Railroad Bridge Widening Project.
- Section 2. That the City Administrator is hereby authorized and directed to file application with the District Public Works Integrating Committee of Hamilton County (DPWIC) for Ohio Public Works funding under State Issue 2/LTIP for 1993.
- Section 3. That if Issue 2/LTIP funds are awarded, the Mayor and Clerk of Council/Finance Director are authorized to execute all contracts and other documents implementing said program.
- Section 4. That the City of Springdale hereby requests the District Public Works Integrating Committee (DPWIC) and the Ohio Public Works Commission (OPWC) to consider and fund these applications.

<u>Section 5.</u> That this Resolution shall take effect and be in force from and after the earliest period allowed by law.

Dated this 7th day of October, 1992.

President of Council

Attest:

Clerk of Council/Finance Director

Approved:

Mayor

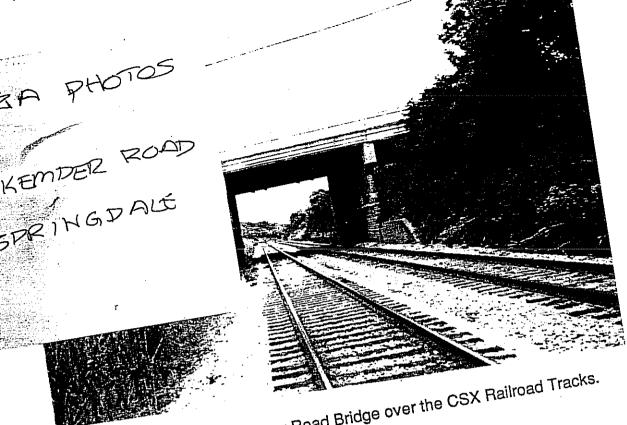
(0-7-92

Date

9/23/92

'STATE' OF, OHIO OEPARTUENT OF TRANSPORTATION " DIVISION OF HICHWAYS BRIDGE INSPECTION REPORT

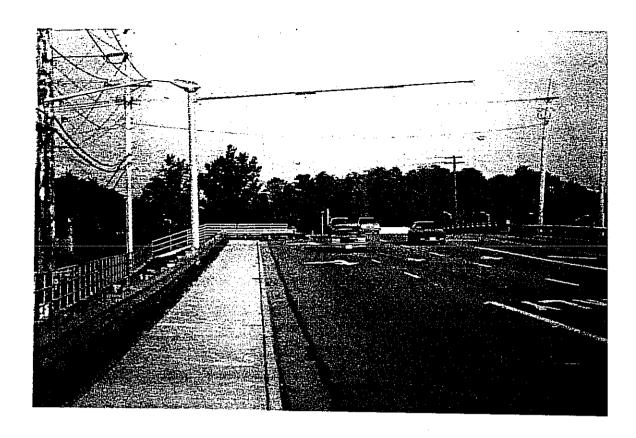
pr-so rev. U+-as	- 1 ·	•			
3 1 3 8 1 4 2	BRIDGE :	HUNBER HAM	<u> 50</u>	266 0038 SPRINGDALE YEAR BUILE	2976
DISTRICT 08	BROCE TYPE 231	TYPE SERVICE 1		2 B AND O RATERDAD HAM	20112
			COND		COND
DECK I. FLOOR		1-CDNC a	/	2. WEARING SURFACE 6-ASPLT 40	,2
3. CURBS. SIDEWALKS & WA	UKWAYS 1-CONC	/1-CONC 9	./	4. MEDIAN 41	
5. RAILING	3-CC	INC/ALUMIO	1	6, DRAINAGE O 42	
7. EXPANSION JOINTS	· ;	41)	2	8. SUMMARY 43	8
SUPERSTRUCTURE	•	•			17
9. ALIGHWENT	MAX.SPAN=	. 37 <u>12</u>	-	10, BEAMS/GIRDERS/SLAB 6-PSBO 44	H
11. DWPHRAGUS or CROSSE	RAMES TOT-LGTH=	99 13	 -	12. JOISTS/STRINGERS 45	+
13. FLOOR BEAUS		14		14. FLOOR BEAM CONNECTIONS 46	
15. VERTICALS	· · · · · · · · · · · · · · · · · · ·	1.5	_	16, DIAGONALS 43	<u>'</u>
17, END POSTS		15		18, TOP CHORD 48	4
19. LOWER CHORD	· :	17		20. LOWER LATERAL BRACING 49	2
21. TOP LATERAL BRACING	1	. 18		22. SWAY BRAÇING SE	,
23, PORTALS	· · · · · · · · · · · · · · · · · · ·	19		24. BEARING DEVICES 4-ELASTO 5	1
25. ARCH		20		26, ARCH COLUMNS or HANGERS 57	
27. SPANDREL WALLS	;	21		28. PAINT (YEAR/CONDITION) 53	
29. PINS/HANCERS/HINGES_	:	77		30. FATIGUE PRONE CONNECTIONS 56	5
	•	23	5	J2, SUMMARY 55	18
ISUBSTRUCTURE		<u> </u>	Ť	OC. JUMBANI	-
33. ABUTMENTS	<u>- ; </u>	2-CONC24	/	34. ABUTMENT SEATS	<u>,</u>
15. PIERS FAST F	ier Spalling	2 C ONC25	2	36. PIER SEATS 55	, _
37. BACKWALLS		25		38. WINGWALLS 60	, /
39, FENDERS and DOLPHINS	SPANS=	= 3		40. SCOUR OVER RAIL ROAD. 61 /	Z
	PIERS=			42. SUHMARY 6.	7
CULVERTS					
43. CENERAL	:				
45. SHAPE		30	ļ	46. <u>SEAMS</u> 6:	
47. HEADWALLS or ENDWALL	5	31	 	48, SCOUR 61	
49. CHANNEL			_	50. SUMMARY 6	<u>' </u>
51. ALIGNHENT		33		52. PROTECTION N 6	<u> </u>
53. WATERWAY ADEOUACY		74	_	54, SUMMARY 6	9
APPROACHES 55. PAVEMENT		2-ASPLT35	1	56, APPROACH SIABS 74	۷_
57. GUARDRAIL		36	1	58. RELIEF JOINTS 7	1
59. EHBANKHENT BROC	width= 60.0	37	/	50, SUMMARY PCT-LEGAL=150 7	28
GENERAL 61. NAMEATION LIGHTS		38		62, WARNING SIGHS MAINT-RESP:3-COUNTY 7	3
MVC ON=9999 63, VERTICAL CLEARANCE	UND=2107	7a_ N	N	164, GENERAL APPRAISAL & OPERATIONAL STATUS 74	D STAT
				66, REVIEWED BY	
65. INSPECTED BY	4-Junes	<u> </u>	14	Idland PE	<u> 53</u>
	SCHED .	76 1	NITHLS	-	HITWLS
			٠ اه	11111 * * *	رم ان



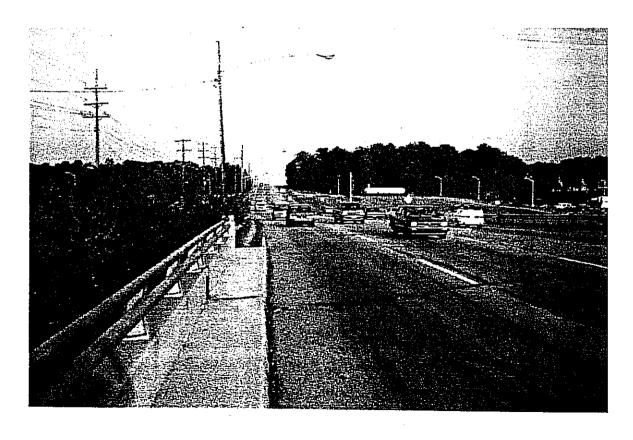
South Side of East Kemper Road Bridge over the CSX Railroad Tracks.



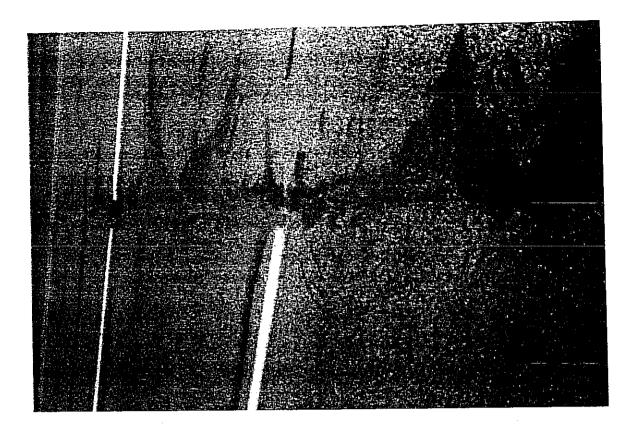
Spalling of Bridge Pier Columns of the East Kemper Road Bridge over the CSX Railroad Tracks.



West End of Bridge. Note that widening of Kemper Road for Third Westbound Lane is Completed up to the bridge. This Widening Continues West to SR - 747.



East End of Bridge. Note Deteroriated Condition of Asphalt Surface on the Bridge Deck.



Note Transverse Cracking of Asphalt above each Pier Location.



Asphalt Surface on Bridge is Rutted. Note Longitudinal and Transverse Cracking of Pavement. Also Note Polished Aggregate of Asphalt Surface.

ADDITIONAL SUPPORT INFORMATION

For Fiscal Year 1994 (July 1, 1993 through June 30, 1994), jurisdictions shall provide the following support information to help determine which projects will be funded. Information on this form must be accurate, and where called for, based on sound engineering principles. Documentation to substantiate the individual items may be required by the Support Staff if information does not appear to be accurate.

 What is the condition of the repaired, or expanded? For b Form BR-86. 	e existing infrasti ridges, submit a	ructure to copy of th	be në cur	replaced, rent State
Closed	Poor			
Fair	Good	<u> </u>		
Give a brief statement of the nature of as: inadequate load capacity (bridlenes; structural condition; substance grades, curves, sight distances, dracapacity. If known, give the appreplaced, repaired, or expanded.	dge); surface typ ard desian eleme	e and w ents such	idth; r as be	number of erm width.
Pavement across this bridge structu	re has deteriora	ted. The	pave	ment has
incurred rutting, in excess of 2" in so	me areas. The c	sphalt joi	nts ab	ove each
pier and abutment are severly deterior	<u>orated. Widening</u>	of this br	<u>idge v</u>	vill support
the expanding traffic volumes along I	ast Kemper Road	<u>1.</u>		
2) If State Issue 2 funds are awar receiving the Project Agreeme 1993) would the project be u reviewing status reports of previ a particular jurisdiction's anticip	ent from OPWC (nder contract? ious projects to he	(tentative The Supp elp judge	ly set oort Sto	for July 1, aff will be
Four (4) (weeks) mont	ths (Circle one)			
Are preliminary plans or engineering of	completed?	Yes	No	·
Are detailed construction plans comp	oleted?	Yes	No	
Are all right-of-way and easements a	cquired?	Yes	No	N/A)
Are all utility coordinations completed	d	Yes	No	N/A
Give an estimate of time, in weeks or yet completed.	·	lete any il eeks/mon		oove not

3)	service area? (Typical examples may include the effects of the completed project on accident rates, emergency response time, fire protection, health hazards, user benefits, and commerce.) Please be specific and provide documentation if necessary to substantiate the data.
	The additional westbound lane proposed for this bridge will service expanding traffic
	volumes, as warranted by a traffic study by Barton, Aschman Associates, Inc. The
	present bridge superstructure does not have a sidewalk. The planned developments east
	of the bridge will require pedestrian access to the Tri-County Shopping area which the
	proposed bridge widening will provide.
	The replacement of deteriorated deck joints above the piers and abutments will protect
	the bridge substructure from further damage due to salt leakage through these joints.
	The replacement of cracked and rutted asphalt on the bridge superstructure will protect the concrete box beams from infiltration damage and provide a safer riding surface.
4)	What type of funds are to be utilized for the local share for this project?
	Federal ODOT Local <u>X</u>
	MRF X ODNR CD
	Other
	NOTE: If MRF funds are being used for the local share, the MRF application must have been filed by August 1, 1992, for this project with the Hamilton County Engineer's Office.
	The minimum amount of matching funds for grant projects (local share) must be at least 10% of the TOTAL CONSTRUCTION COST. What percentage of matching funds are being committed to this project?
	33 %_
5)	Has any formal action by a federal, state, or local government agency resulted in a complete or partial ban of the use or expansion of use for the involved infrastructure? (Typical examples include weight limits, truck restrictions, and moratoriums or limitations on issuance of building permits.) A copy of the legislation must be submitted with the application. THE BAN MUST HAVE AN ENGINEERING JUSTIFICATION TO BE VALID.
	Complete Ban No Ban X
	Will the ban be removed after the project is completed?
	Yes No

6)	What is the total number of existing users that will benefit as a result of the
	proposed project?

00	000	\ /	/7	0	0.0	101	
28	ルフス	Х	(.2)	= 33	.020	

For roads and bridges, multiply current documented Average Daily Traffic by 1.20. For public transit, submit documentation substantiating the count. Where the facility currently has any restrictions or is partially closed, use documented traffic counts prior to the restriction. For storm sewers, sanitary sewers, water lines, and other related facilities, multiply the number of households in the service area by 4.

7) Has the jurisdiction developed a Five Year Capital Improvement Plan as required in O.R.C., Chapter 164? (This must be included with the application to be considered for funding.)

Yes	X	No

8) Give a brief statement concerning the regional significance of the infrastructure to be replaced, repaired, or expanded.

East Kemper Road is a seament of the east-west arterial that consists of east and west Kemper Road and connects the following north-south arterials: U.S. 27 (Colerain Avenue), U.S. 127 (Hamilton Avenue), Winton Road, S.R. 4 (Sprinafield Pike), S.R. 747 (Princeton Pike), Chester Road, Mosteller Road, Reading Road (Cincinnati-Dayton Road), U.S. 42, Reed Hartman Highway, and U.S. 22/S.R. 3 (Montgomery Road). In regards to the CSX Railroad bridge expansion, the most significant impact will be on the portion of Kemper Road between Winton Road & Mosteller Road, which would significantly affect the communities of Forest Park, Greenhills, Sharonville, Sprinadale, Woodlawn & Sprinafield Township. The total combined population for these communities is approximately 88,600. The Planned Unit Development on the former Kroger Candy Plant property. which will consist of a Phase I development of two anchors (Wal-Mart & Sam's) and various smaller retail shops, will require an additional westbound lane (see attached traffic study). This westbound lane has already been constructed across the Tri-County Mall frontage. In addition, it is a requirement of the developer of the former Kroger Candy Plant that this westbound lane be constructed as part of this new development. This leaves only the bridge portion for widening. The development planned for this property will create an estimated 470 new permanent jobs and increase peak hour traffic by approximately 50%.

STATE ISSUE 2 PROGRAM - ROUND 6

LTIP PROGRAM - ROUND 5

FISCAL YEAR 1994 PROJECT SELECTION CRITERIA - JULY 1, 1993 TO JUNE 30, 1994

ADOPTED BY THE DISTRICT 2 INTEGRATING COMMITTEE JULY 17, 1992

AMENDED BY THE DISTRICT 2 INTEGRATING COMMITTEE SEPTEMBER 18, 1992

JURISDICTION/AGENCY: Stringdale
NAME OF PROJECT: Kemper Rd Br. W. Dening
TOTAL POINTS FOR THIS PROJECT:
NO. POINTS
1) If Issue 2/LTIP Funds are granted, when would the construction contract be awarded? (The Support Staff will assign points based on engineering experience.)
10 Points - Will be under contract by end of 1993
5 Points - Will be under contract by March 30, 1994
O Points - Will not be under contract by March 30, 1994

Ochermen 2)

2) What is the condition of the infrastructure to be replaced or repaired? For bridges, base condition on latest general appraisal and condition rating.

- 20 Points Poor Condition
- 16 Points -
- 12 Points Fair to Poor Condition
 - 8 Points -
 - 4 Points Fair Condition

NOTE: If the infrastructure is in "good" or better condition it will NOT be considered for Issue 2/LTIP funding, unless it is a betterment project that will improve serviceability.

- 3) If the project is built, what will be its effect on the facility's serviceability?
 - 10 Points Significant effect (e.g., widen to and add lanes along entire project)
 - 8 Points Moderate to significant effect
 - 6 Points Moderate effect (e.g., widen exist. lanes)
 - 4 Points Moderate to little effect

4) How important is the project to HEALTH, SAFETY, AND WELFARE of the public and the citizens of the District and/or service area?

- 10 Points Highly significant importance, with substantial impact on all 3 factors
 - 8 Points Considerably significant importance, with substantial impact on 2 factors OR noticeable impact on all 3 factors
 - 6 Points Moderate importance, with substantial impact on 1 factor or noticeable impact on 2 factors
 - 4 Points Minimal importance, with noticeable impact on 1 factor
 - 2 Points No measurable impact
- 5) What is the overall economic health of the jurisdiction?
 - 10 Points Poor
 - 8 Points -
 - 6 Points Fair
 - 4 Points -
 - 2 Points Excellent

6) What matching funds are being committed to the project, expressed as a percentage of the TOTAL CONSTRUCTION COST?
Loan and Credit Enhancement projects automatically receive 5 points, and no match is required. All grant funded projects require a minimum of 10% matching funds.

5 Points - 50% or more

4 Points - 40% to 49.99%

3 Points - 30% to 39.99%

2 Points - 20% to 29.99%

1 Point - 10% to 19.99%

- 7) Has any formal action by a federal, state, or local government agency resulted in a partial or complete ban of the usage or expansion of the usage for the involved infrastructure? POINTS MAY ONLY BE AWARDED IF THE END RESULT OF THE PROJECT WILL CAUSE THE BAN TO BE LIFTED.
 - 5 Points Complete or significant ban-
 - 3 Points Partial or moderate ban
 - O Points No ban of any kind
- 8) What is the total number of existing daily users that will benefit as a result of the proposed project? Appropriate criteria include current traffic counts, households served, when converted to a measurement of persons. Public transit users are permitted to be counted for roads and bridges, but only when certifiable ridership figures are provided.
 - 5 Points 10,000 or more
 - 4 Points 7,500 to 9,999
 - 3 Points 5,000 to 7,499
 - 2 Points 2,500 to 4,999
 - 1 Point 2,499 and under
- 9) Does the infrastructure have REGIONAL impact? Consider origins and destinations of traffic, functional classification, size of service area, number of jurisdictions served, etc.
 - 5 Points Major impact (e.g., major multi-jurisdictional route, primary feed route to an Interstate, Federal Aid Primary routes)
 - 4 Points -

 - 2 Points -
 - Point Minimal or no impact (e.g., cul-de-sacs, subdivision streets)
- _____ 10) Has the jurisdiction enacted the optional \$5 license plate fee, an infrastructure levy, a user fee, or a dedicated tax for infrastructure?
 - 2 Points Two of the above
 - 1 Point One of the above
 - 0 Points None of the above

ADDENDUM TO THE RATING SYSTEM DEFINITIONS

CRITERION 2 - CONDITION

Poor - Condition is dangerous, unsafe or unusable

Fair to Poor - Condition is inadequate or substandard

Fair - Condition is average, not good or poor

CRITERION 5 - ECONOMIC HEALTH

The following factors are used to determine economic health:

- 1) Median per capita income
- 2) Per capita assessed valuation of the total community real estate and personal property
- 3) Poverty indicators
- 4) Effective tax rates
- 5) Total corporate debt as a percentage of assessed valuation
- 6) Municipal revenues and expenditures per capita

CRITERION 9 - REGIONAL IMPACT

Major impact - Primary water or sewer main serving an

entire system

Moderate impact - Waterline or storm sewer serving only

part of a system

Minimal impact - Individual waterline or storm sewer not

part of a system